



WHAT WIND TURBINE DEVELOPMENT CAN, AND CANNOT DO, FOR THE STATE OF NEW JERSEY

Prepared by NJ Department of Environmental Protection for consideration by the Blue Ribbon Panel on Offshore Wind

Frequently Asked Questions:

What Wind Development Can Do:

■ Wind power is a zero air emission technology. This aids New Jersey's goals of reducing carbon dioxide (CO₂), oxides of nitrogen (NO_x), sulfur dioxide (SO₂), and mercury (Hg) emissions. Current Pennsylvania Jersey Maryland Power Pool (PJM) average emissions per megawatt-hour (MWh) are approximately: 3 lbs./MWh (NO_x); 8.5 lbs./MWh (SO₂); 1,194 lbs./MWh (CO₂); and NJ facility Hg emissions are 0.0000072 lbs./MWh (PJM does not track Hg). Any wind generation that is constructed, and integrated into the PJM system such that other fossil generation plants can be scaled back, could result in emission reductions.

■ Wind power supports the New Jersey Renewable Portfolio Standard, which calls for 6.5% of the total power consumed in NJ come from Class 1 and 2 renewable resources by 2008, with a 20% goal by 2020.

■ Wind power could provide distributed generation in the shore area, which is currently transmission constrained. Any new wind generation that is constructed could offset currently operating electric generation capacity in the shore region, and could serve as a more localized power source (reducing the need for long distance power transmission construction in New Jersey). New wind power generation could also require localized transmission system upgrades in the shore region depending on the amount of new generation capacity constructed.

■ Wind power can provide significant generation capacity, through placement of a number of turbines within a relatively small geographic area. The Feasibility Study conducted for the NJBPU indicated power densities of 20MW capacity per square mile.

■ Wind development in New Jersey can provide jobs and other economic development benefits, as well as increased tax revenues. Jobs could result from installation and maintenance of the turbines and other related infrastructure, and tax revenues assessed on the electricity generation.



■ Wind power qualifies for federal Production Tax Credits—a federal subsidy for energy production based here in New Jersey.

What Wind Development Cannot Do:

■ Wind power cannot significantly reduce fossil fuel or nuclear capacity serving New Jersey. New Jersey's power needs are substantial. Wind power is not capable in the near-term of altering the traditional New Jersey fuel mix in a dramatic way. Additionally, oil contributes only a small fraction of electric generation in the United States and is predominantly used for transportation and home heating. Therefore, wind power will not significantly impact foreign oil imports.

■ Wind is intermittent. It will not provide “base load” power (power available on an “as needed” basis). The intermittent nature of wind power requires additional load management skill be applied by PJM, the regional system operator. PJM is adept at scheduling intermittent resources into the region, and has stated it can accommodate additional intermittent resources without affecting system operating costs.

■ Wind has environmental impacts as well, potentially ranging from avian impacts, to commercial and recreational ocean uses, to wetland impacts.

■ Wind power has aesthetic, or visual impacts. These can be minimized, but not totally eliminated, by placing wind projects far offshore.

State of New Jersey Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters

Edward J. McKenna, Jr., Mayor of Red Bank and a member of the State Planning Commission. Mr. McKenna will chair the Blue Ribbon Panel.

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Bonnie J. McCay, PhD, a Rutgers Board of Governors Distinguished Service Professor at Cook College. She is currently Vice Chair of the Marine Protected Areas Federal Advisory Committee, U.S. Department of Commerce and Department of Interior.

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